

STANWATKINSIUS, A NEW GENUS OF AUSTRALIAN JEWEL BEETLES (COLEOPTERA: BUPRESTIDAE: AGRILINAE) WITH A KEY TO KNOWN SPECIES

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Summary

BARKER, S. & BELLAMY, C. L. (2001) *Stanwatkinsius*, a new genus of Australian jewel beetles (Coleoptera: Buprestidae: Agrilinae) with a key to known species. *Trans. R. Soc. S. Aust.* **125**(1), 1-14, 31 May, 2001.

Seven species of jewel beetles previously placed in the genus *Cissex* (Coleoptera: Buprestidae: Agrilinae) are recognised as different and a new genus *Stanwatkinsius* is proposed to accommodate them, their synonyms and nine new species. The species ascribed to the new genus are *Cissex perplexa* (type species), *C. carenceps*, *C. cincta*, *C. constricta*, *C. lindi*, *C. subcarinifrons* (= *C. occidentalis*), *C. uniformis* (= *C. coracoides*), *Stanwatkinsius crassus* sp. nov., *S. demarzi* sp. nov., *S. grevilleae* sp. nov., *S. kermeli* sp. nov., *S. powelli* sp. nov., *S. macmillani* sp. nov., *S. rhodopus* sp. nov., *S. speciosus* sp. nov. and *S. viridimarginatus* sp. nov. A key is provided for the identification of these species. The relationships of the genus to other members of the tribe Coracini are discussed.

KEY WORDS: Australia, Coleoptera, Buprestidae, *Cissex*, *Stanwatkinsius*, new genus, new species.

Materials and Methods

Specimens examined were borrowed from or are deposited in the following institutions and collections:

ANIC - Australian National Insect Collection, Canberra.

BMNH - The Natural History Museum, London.

CLBC - C. L. Bellamy collection, Los Angeles, California.

HDWA - H. Demarz, Woodridge, Western Australia.

MGWA - M. Golding, Beverley, Western Australia.

MHSA - M. Hanlon, Sydney, New South Wales.

MNHN - Muséum National d'Histoire Naturelles, Paris.

MPWA - M. Powell, Melville, Western Australia.

NMVA - National Museum of Victoria, Melbourne, Victoria.

SAMA - South Australian Museum, Adelaide, South Australia.

SWLA - S. Watkins, Lismore, New South Wales.

WAMA - Western Australian Museum, Perth, Western Australia.

Type numbers listed below for specimens from the Blackburn collection, BMNH, are not type accession numbers assigned in the BMNH system, but rather Blackburn collection type numbers.

All of the specimens were examined under a binocular microscope. They were photographed with

a Nikon 35 mm camera with extension tubes and the transparencies were scanned and digitally manipulated by computer using Adobe Photoshop. Specimens were prepared for electron microscopy by vacuum coating with gold and then photographed using an Hitachi S-450 Scanning EM.

Introduction

The buprestid genus *Cissex* Gory & Laporte, 1839 (Agrilinae: Coracini) occurs throughout Australia and its distribution extends north and east into New Guinea, the Solomon Islands, and the Philippine archipelago. In Australia, most species of *Cissex* are associated with *Acacia* species; the larvae bore into decaying wood and the adults are mostly foliage feeders. Occasionally the adults visit flowers of the host plants and other locally blooming species. The last revision of Australian *Cissex* was by Carter (1923); subsequent collecting has revealed many undescribed species. In the course of re-examining species attributed to the genus, we found that seven species originally placed in *Cissex* are different from all other described species. Blackburn (1891:300), when describing *Cissex perplexa* Blackburn, the first of the seven, outlined the differences between it and typical *Cissex* species. Stan Watkins, a prolific collector in NSW, drew our attention to an undescribed species allied to *Cissex perplexa* differing from typical *Cissex* spp.; we have recognised eight additional species which fit this category. Some of the species are associated with either *Casuarina* or *Allocasuarina* spp. Many of the others have been

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found on the leaves of *Grevillea* spp. and *Hakea* spp. The major morphological departure from *Cixseis* is the structure of the ovipositor, which is similar to but not identical with the structure of the ovipositor in *Meliboeithon* Obenberger. Both have incurving setae, sharp in *Meliboeithon*, blunt at the top and sharp further down in all species of this distinct group. *Cixseis* species have a tubular ovipositor without incurving setae. This difference and others have prompted us to erect a new genus for their placement. We propose the name *Stanwatkinsius* for the new genus.

Stanwatkinsius gen. nov.

Type species. *Cixseis perplexa* Blackburn, 1891 (present designation).

Diagnosis: Small, length less than 10 mm, subcylindrical; general form somewhat resembling *Astracis* Gory & LaPorte and *Meliboeithon*; surface punctate and/or transversely rugose, iridescent, sparsely pubescent, the sexes are dichromatic in some species.

Description

Head: eyes small, widely separated, inner margins subparallel; frontovertex broad, transverse, often with feeble longitudinal medial costae; antennal insertions large, moderately to widely separated, with sinuate carina dorsad to each (Fig 1); epistome declivous ventrad of antennal insertions; gena with single rounded acute projection below eye; with narrow depression to receive basal antennomeres in repose; labrum punctate; mandible robust. Antennae triangularly serrate from antennomere 4 or 5. Pronotum wider than long, widest at posterior margin; anterior margin evenly arcuate; posterior margin bisinuate; lateral margin narrowing before subacute lateroposterior angle, even before narrowing to anterior margin; disc flattened medially, evenly rounded laterally; one preapical carina to well before midpoint extending arcuately away from lateral margin and extending anterior to lateroposterior angle to well beyond midpoint. Scutellum moderate size, subcordiform, wider than long; anterior margin even, transverse; posterior margin strongly attenuate. Elytra much longer than wide; widest near posterior third, but wider opposite humeri than at posterior margin of pronotum; lateral margins subparallel from opposite humeri to about mid-point, widening to posterior third before gradually narrowing to separately subtruncate apices; posterior portion of lateral margin serrate or serrulate; epipleuron short, extending opposite length of metepisternum; separated from disc by small carina. Prosternal process with truncate apex

and two acute lateral projections posterad of procoxae; metepimeron not visible; anterior margin of metacoxal plate concave medially; posterior margin feebly emarginate; abdominal sterna each progressively shorter than preceding, sutural margins feebly arcuate medially; sterna 3-5 with visible lateral margins each with prelateral straight groove, complete around margin of 5. Femora fusiform, tibiae longer than femora, each with pair of spines at distal apex; metatibiae with setigeris on distal portion; tarsi 1-4 each with ventral pulvillus, each pulvillus broader than the previous one, those on tarsomeres 3 and 4 bilobed; tarsomere 5 with claws feebly appendiculate and notched basally and asymmetric, outer claw thicker than inner claw. Genitalia: male, all very similar relatives; ovipositor, "coraebine type", similar in that figured in Bellamy (1988: 423, Fig. 61) for *Meliboeithon* except ventral setae blunt not sharp. Ovipositor in *Cixseis* in form of

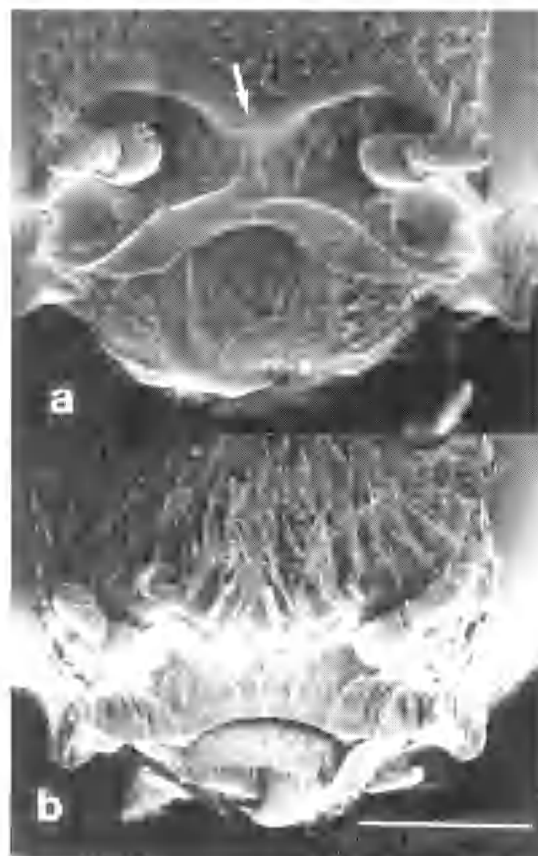


Fig. 1. Scanning electronmicrograph of the head region between the eyes. a. *Cixseis signata* Gory & LaPorte; b. *Stanwatkinsius perplexus* (Blackburn). In each only the two basal antennomeres are present; the arrows indicate the junction between the frons and the epistome. Scale bar = 0.5 mm.

flattened tube, without ventral setae (Bellamy 1988: 416).

Remarks

Stanwatkinsius differs from *Cisseis* in the following combination of characters and character states. The plant associations of the various species: most are associated with species of *Grevillea* or *Hakea*; some with either *Casuarina* or *Allocasuarina*, and differ from the general *Cisseis* species association with mainly various species of *Acacia*. The morphology of the ovipositor differs between these genera. In *Cisseis* it is a flattened tube with short, paired styli. In *Stanwatkinsius* it is a scoop formed from incurving setae. None of the species of *Stanwatkinsius* has spots on the elytra formed from setae as in various *Cisseis*. *Neaspides* Blackburn and *Pachycisseis* Thery species. All have plain metallic colouration. In *Stanwatkinsius* the mandibles are more robust and a different shape from those in *Cisseis*; the antennal insertions are higher than in *Cisseis*; in *Cisseis* the edge of the frons lacks punctures and is very distinct, there is a step between this structure and the epistome whereas in *Stanwatkinsius* the junction between the frons and epistome is indistinct and the fovea surrounding the insertion of the basal antennomere is less prominent (Fig. 1). In *Stanwatkinsius* the labrum is narrow and has a brush of stout adpressed setae along the apical margin. On the pronotum, the dorsal carina does not reach the apical margin in any species, whereas in *Cisseis* the dorsal carina meets the apical margin in all but a few species. The asymmetrical tarsal claws are quite different from *Cisseis* species, and uncommon in buprestids in general. One example of tarsal claw asymmetry in coraeibines was discussed by Bellamy (1990) for the Asian and Philippine genus *Coraeosoma* Obenberger.

Key to *Stanwatkinsius* species

1. Body all green ♂ & ♀ 2
- Body other than green 3
2. ♂ & ♀ dark green, southern species *uniformis* (Kerremans)
- ♂ bright green, northern species *kermeli* sp. nov.
3. ♂ head green apically, dark blue basally; ♀ head coppery 4
- ♂ head other than green & blue 5
4. ♂ & ♀ pronotum coppery *speciosus* sp. nov.
- ♂ pronotum dark blue; ♀ pronotum coppery *constrictus* (Blackburn)
5. ♂ & ♀ head purple or purple-blue, ventral surface purple *powellii* sp. nov.
- Head other than purple 6

6. ♀ head & pronotum rosy, elytra dark blue *rhodopus* sp. nov.
- ♀ head & pronotum other than rosy 7
7. ♂ & ♀ head, pronotum ventral surface bronze 8
- ♂ & ♀ head, pronotum ventral surface other than bronze 9
8. ♂ & ♀ elytra bronze *perplexus* (Blackburn)
- ♂ elytra blue; ♀ elytra bronze with red apical margins *cateniceps* (Carter)
9. ♂ & ♀ head, ventral surface green, pronotum & elytra mostly brown *subcarinifrons* (Thomson)
- ♂ & ♀ elytra other than all brown 10
10. Elytra with green lateral margins 11
- Elytra with red lateral margins 12
11. ♂ head, pronotum blue *macmillani* sp. nov.
- ♂ head green, pronotum medially brown laterally green; ♀ head & pronotum brown *viridimarginalis* sp. nov.
12. ♂ & ♀ head, pronotum coppery *lindi* (Blackburn)
- ♂ & ♀ head, pronotum other than coppery 13
13. ♂ head, pronotum, ventral surface green 14
- ♂ head, pronotum, ventral surface blue 15
14. ♀ head bronze-yellow; small, 5-6 mm *cinctus* (Kerremans)
- ♀ head green; larger, >7 mm *crassus* sp. nov.
15. Smaller species, head finely punctured; occurs on WA coastal plain *demarzi* sp. nov.
- Larger species, head coarsely punctured; occurs inland WA *grevilleae* sp. nov.

Stanwatkinsius perplexus (Blackburn, 1891),
comb. nov.
(FIGS 1b, 2a)

Cisseis perplexa Blackburn 1891:300. Kerremans 1903:230. Carter 1923:167; 1929:279. Obenberger 1934:852.

Holotype: ♀, Blackburn (T 2185), BMNH, examined.

Other specimens examined: WA: ♂, Wannamal, 8.ix.1970, S. Barker, SAMA; ♂, Korrelocking, 22.ix.1970, S. Barker, SAMA; 2 ♂♂, Quairading, 7.ix.1970, S. Barker, SAMA; ♂, 77 km E T.O. Old York Rd, 7.xi.1970, S. Barker, SAMA; 5 ♂♂, 4 ♀♀, South Tammin Flora Res., 8.xi.1970, S. Barker, CLBC & SAMA; 2 ♀♀, Wannamal, 10.xi.1970, S. Barker, SAMA; ♀, 77 km E T.O. Old York Rd, 21.xi.1970, S. Barker, SAMA; 2 ♂♂, ♀, South Tammin Flora Res., 6.i.1971, S. Barker, SAMA; ♀, 3 km S Israelite Bay T.O. SW Mt Ragged, 10.xii.1974, S. Barker, SAMA; ♀, 3 km E Norseman, 14.xii.1974, S. Barker, SAMA; ♀, South Tammin Flora Res., 20.xii.1975, S. Barker, SAMA; ♀, South Tammin Flora Res., 8.x.1976, S. Barker, SAMA; ♀,

25 km E Lake Grace, 19.ix.1979, F.H. Uther Baker, SAMA, SA: 4 ♂♂, ♀, 18 km E Kimba, 8.x.1979, S. Barker, SAMA: ♂, Lake Gilles C.P. E Kimba, 14.x.1990, S. Barker, SAMA: ♂, ♀, no data, SAMA.

Male

Size: 8.0 x 2.9 mm (20).

Colour: Head mostly coppery-purple, green at base, all green in a few specimens. Antennae bronze. Pronotum mostly coppery-purple, anterior margin green. Scutellum coppery-purple. Elytra bronze. Ventral surface and legs coppery-purple.

Shape and sculpture: Head deeply punctured, setose, low medial carina from apex, projecting into median impressed line post-medially, reaching base. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate, apical margin projecting medially over half its length, basal margin bisinuate; dorsal carina diverging from lateral margin at base, convex, approaching but not reaching angle, laterally setose. Scutellum scutiform, without punctures, flat, basal margin slightly concave. Elytra heavily striolate basally, rugose along suture, scutellate laterally; more or less parallel-sided, narrowed post-medially to rounded apices, apical margin subserrate. Ventral surface scutellate, densely covered by long setae as are legs.

Female

Size: 8.5 x 3.0 mm (17).

Colour: Head coppery-purple. Pronotum bronze with coppery-purple reflections. Elytra bronze. Ventral surface and legs coppery purple.

Shape and sculpture: as in male.

Distribution

WA: Common in drier heath areas associated with *Allocasuarina* spp. SA: Kimba on *Allocasuarina helmsii* (Ewart & M. Gordon).

Remarks

This species is the largest in the genus and the only one that is entirely bronze.

Stanwinkinsius carenceps (Carter, 1923).

comb. nov.

(FIG. 2b)

Cisseis carenceps Carter 1923: 171; 1929:278. Oberberger 1934:843.

Holotype: 3 ♂♂ syntypes, BMNH, examined.

Other specimens examined: WA: 2 ♂♂, 2 ♀♀, 48 km E Geraldton, 22.ix.1958, S. Barker, SAMA: ♀, Tuttaning, 1.1.68, S. Barker, SAMA: ♀, Ballardui,

16.ix.1970, S. Barker, SAMA: ♂, Payne's Find, 17.ix.1970, S. Barker, SAMA: ♀, Wialki, 19.ix.1970, S. Barker, SAMA: 3 ♂♂, 53 km W Mullewa, 20.ix.1996, T.M.S. Hanlon, MHSA: 3 ♂♂, Watheroo, 3.xi.1990, H. Demarz, HDWA: ♂, Tammin Res., 28.x.1975, H. Demarz, HDWA: ♂, ♀, 3 km E Talling Homestead, 23.xi.1989, S. Barker, CLBC: ♀, Talling stn., 23.ix.1989, on *Allocasuarina campestris*, Barker/Watkins, SWLA: ♂, ♀, 13 km N Galena, 8.ix.1998, on *Allocasuarina campestris*, T.M.S. Hanlon, MHSA: ♀, 39 km N Galena, 8.ix.1998, on *Allocasuarina campestris*, T.M.S. Hanlon, MHSA.

Male

Size: 8.3 x 2.8 mm (11).

Colour: Head, antennae, pronotum and scutellum bronze. Elytra either deep violaceous with red margin around the apices or grey-blue with red margin around the apices and red along suture on each elytron from middle to apex. Ventral surface, legs bronze.

Shape and sculpture: Head deeply punctured, setose, with a median apical carina extending to base as impressed line. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum deeply striolate, apical margin broadly projecting medially, basal margin bisinuate, dorsal carina separated widely from margin except at base, not reaching apical margin; laterally setose. Scutellum flat, without punctures. Elytra striolate, laterally parallel-sided from base, rounded post-medially, then narrowed to rounded apices. Ventral surface striolate, with moderately long setae.

Female

Size: 8.7 x 3.0 mm (8).

Colour: Head, antennae, scutellum bronze. Elytra bronze, apical margin red. Ventral surface and legs bronze.

Shape and sculpture: as in male.

Distribution

WA: most common on the northern edge of the wheatbelt. Associated with *Allocasuarina campestris* (Diels).

Remarks

Stanwinkinsius carenceps and *S. perplexus* are closely allied species. Males are easily distinguished by their different colour combination. The females of this species are distinguished from females of *S. perplexus* by their elytra which have a red apical mark, absent in the other species.

Stanwinkinsius cinctus (Kerremans)

(FIG. 2a)

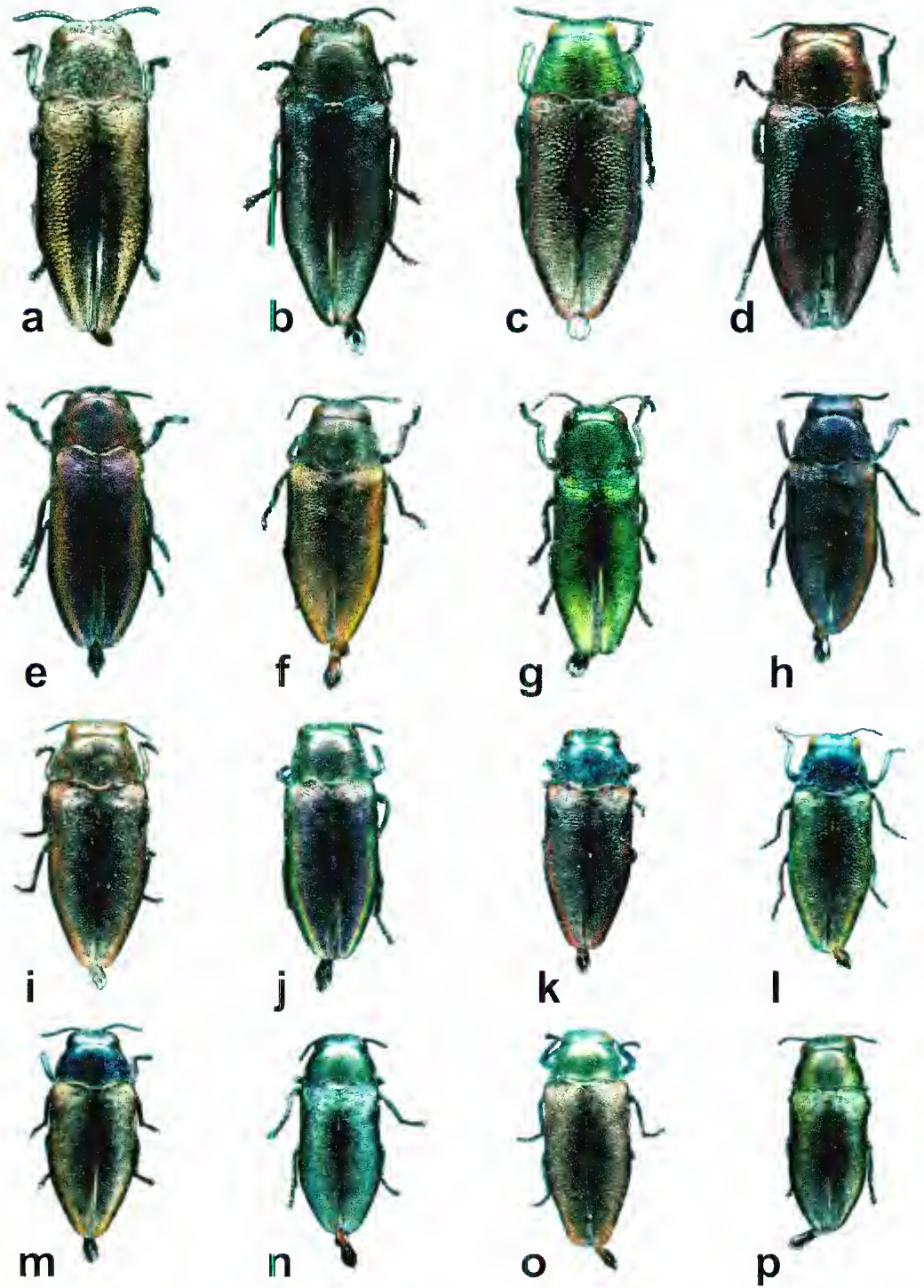


Fig. 2. Habitus illustrations of the following *Stanwatkinsius* species: a. *Stanwatkinsius perplexus* (Blackburn). b. *S. careniceps* (Carter). c. *S. crassus* sp. nov. d. *S. rhodopus* sp. nov. e. *S. powelli* sp. nov. f. *S. speciosus* sp. nov. g. *S. kermeti* sp. nov. h. *S. constrictus* (Blackburn). i. *S. lindi* (Blackburn). j. *S. viridimarginalis* sp. nov. k. *S. grevilleae* sp. nov. l. *S. macmillani* sp. nov. m. *S. demarzi* sp. nov. n. *S. uniformis* (Thomson) o. *S. cinctus* (Kerremans). p. *S. subcarinifrons* (Thomson). Scale bar = 5 mm.

Cisseis cincta Kerremans 1898:166; 1903:229, Carter 1923:167 (syn. *subcarinifrons*); 1929:279, Ohenberger 1934:855 syn. nov.

Holotype: ♀, *Cisseis cincta* Kerremans, Australia, Oberthur, BMNH, examined.

Other specimens examined: WA: 3 ♂♂, ♀, Coorow, W.A., 245 km N, on non-prickly *Hakea*, 16.x.38, Du B. ANIC; ♂, Marloo sta., 1931-1941, A. Goerling, ANIC; ♂, 17 km S Northampton, 1.x.1981, I.D. Naumann & J.C. Cardale, ANIC; 2 ♂♂, 80 km N Moora, 20.x.1996, Kershaw/Golding, MGWA; ♂, Woodridge, intercept trap, 10.xi.1998, H. Demarz, SAMA; 2 ♂♂, 13 km N Galena, 11.ix.1998, T.M.S. Hanlon, MHSA.

Male

Size: 5.6 x 2.2 mm (10).

Colour: Head green. Antennae: antennomeres 1-2 green; 3-11 black with green reflections. Pronotum, scutellum green. Elytra dark brown medially, bronze-red laterally. Ventral surface and legs green.

Shape and sculpture: Head punctured, shallow median sulcus at the apex extending as impressed line reaching base. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate; apical margin broadly projecting medially, basal margin bisinuate; dorsal carina diverging from lateral margin at base then curving towards it post-medially, not reaching the margin. Scutellum flat, without punctures, basal margin concave. Elytra shallowly punctured along suture rest scutellate; laterally parallel-sided from base, rounded post-medially and narrowed to rounded apices. Ventral surface shallowly scutellate; very short setae.

Female

Size: 5.6 x 2.2 mm (2).

Colour: Head yellow-bronze. Antennae: antennomeres 1-2 yellow-bronze; 3-11 black with green reflections. Pronotum, scutellum yellow-bronze. Elytra dark brown medially, bronze-red laterally. Sternum and legs yellow-bronze. Abdomen green.

Shape and sculpture: as in male.

Distribution

WA: Coastal plain and Geraldton district, associated with *Hakea* spp.

Remarks

Stanwatkinsius cinctus is one of the smallest species. It can only be confused with *S. crassus* sp. nov. which has a similar colour combination but is one of the largest species. The structure of the male

genitalia easily separates them. In *S. cinctus* the aedeagus is narrow and the parameres are slightly folded dorsally. In *S. crassus* sp. nov. the aedeagus is broad and flat.

Stanwatkinsius constrictus (Blackburn, 1897),
comb. nov.
(FIG. 2h)

Cisseis constricta Blackburn 1887:254, Kerremans 1892:224; 1903:229, Carter 1923:167; 1929:278, Ohenberger 1934:844.

Holotype: ♂, *Cisseis constricta* Blackburn, W.A. (1713) BMNH, examined.

Other specimens examined: WA: 2 ♀♀, Coorow, 245 km N, 16.x.38, on prickly *Hakea*, HWB, ANIC; 3 ♂♂, 2 ♀♀, Coorow (sic), 17.x.1938, on prickly *Hakea*, Du Boulay collection, WAMA; 9 ♂♂, 7 ♀♀, Coorow, 17/18.x.1938, on prickly *Hakea*, H. W. Brown, MHSA; 2 ♀♀, Spencers Brook, 16.xii.1938, R.P. McMillan, WAMA; 5 ♂♂, 3 ♀♀, Wilga, 11-30.x.74, K. & E. Carnaby, ANIC; 2 ♂♂, ♀, Watning, 12.xi.50, R.P. McMillan, SAMA; ♀, Pindar, 22.ix.58, on *Casuarina*, S. Barker, SAMA; ♀, 32.09S 116.07E, Canning Reservoir; 11 km E Armidale, 8.xi.77, T. A. Weir, ANIC; 6 ♂♂, 2 ♀♀, 12.xii.1977, 3 km SW Quairading, K. Kershaw, MPWA; 2 ♂♂, Stirling Ra., 15.xi.79, D. Knowles, MPWA; ♂, 28 km S Ravenshorpe, on *A. humilis*, 22.xii.91, Golding/Powell, MPWA; ♀, 56 km NE Wubin, 18.ix.91, on *Hakea* leaves, M. Powell, MPWA; ♂, ♀, 12 km N Galena Bridge, on *A. campestris*, 30.ix.92, Golding/Powell, MPWA; ♂, Wicherina Dam, on *Grevillea* leaves, 17.i.93, Golding/Powell, MPWA; 3 ♀♀, 25 km E York, on *Hak. trifurcata*, 25.x.1997, M. Powell, MPWA; 2 ♀♀, 21.1 km SE Armidale, *Hak. trifurcata*, 14.xi.1997, Golding/Powell, MPWA; ♂, ♀, 13 km N of Galena, 11.ix.1998, T.M.S. Hanlon, MHSA; 2 ♂♂, 65 km W Watheroo, on *Hakea*, 21.x.98, M. Powell, MPWA; ♂, ♀, Swan R., Lea, SAMA.

Male

Size: 6.0 x 2.4 mm (33).

Colour: Head blue-green apically, purple basally. Antennomeres 1-2 blue-green; 3-11 black. Pronotum purple. Scutellum blue-green. Elytra black medially with red margin encroaching over humeral callus to basal margin. Ventral surface and legs purple with blue-green reflections.

Shape and sculpture: Head closely punctured, median sulcus at apex, short median glabrous line at base. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate; apical margin projecting medially, basal margin sinuate; dorsal carina

diverging from ventral carina at base, more or less parallel to ventral carina but sinuate, not reaching apical margin. Scutellum flat, without punctures. Elytra scutellate, laterally more or less parallel-sided from base, rounded post-medially and narrowed to rounded apex. Ventral surface scutellate, with short setae pointing posteriorly.

Female

Size: 6.1 x 2.4 mm (30).

Colour: Head coppery. Antennomeres 1-2 coppery; 3-11 black. Pronotum and scutellum coppery. Elytra black medially with a coppery margin encroaching over humeral callus to the basal margin. Ventral surface and legs coppery.

Shape and sculpture: as in male.

Distribution

SW WA.

Remarks

Blackburn described *C. constricta* from Western Australia and *C. lindi* from South Australia. Carter (1923) synonymised *C. lindi* with *C. constricta*. Neither form is found in the other state and because of differences in the structure of male genitalia and colour, herein we consider them separate species. This species is closest to *S. demarzi* sp. nov. They can be distinguished on the following: *S. demarzi* is smaller than *S. cinctus*; the ventral surface of *S. cinctus* males is purple but in *S. demarzi* it is blue-green.

Stanwatkinsius crassus sp. nov.

(FIG. 2c)

Holotype: ♂, Lake Grace, W.A., 15.xi.1971, K. & E. Carnaby, ANIC.

Allotype: ♀, Lake Grace, W.A., 14.xi.89, E. Sutton Collection, QMBA.

Paratypes: WA: ♂, 74 km W Balladonia, 21.ix.1978, T.M.S. Hanlon, on *Grevillea* flowers, WAMA; ♀, 31.11S 120.30E, 67 km WSW Coolgardie, 7.ix.1981, D.C.F. Rentz, ANIC. SA: ♂, ♀, no data, SAMA; ♂, no data, Blackburn collection, SAMA; ♂, no data, NMVA; ♀, ii.1913, NMVA.

Male

Size: 7.6 x 3.0 mm (5).

Colour: Head green. Antennomeres: 1-2 green; 3-11 black. Pronotum and scutellum green. Elytra black medially, purple-red laterally. Ventral surface, legs green.

Shape and sculpture: Head punctured, median

carina from apex to middle extending to base as impressed line; pre-medial glabrous area on each side. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum deeply striolate; anterior margin broadly projecting medially; basal margin bisinuate; dorsal carina diverging from lateral margin at base in a curve which approaches the lateral margin post-medially but does not reach it. Scutellum flat, without punctures, anterior margin concave. Elytra shallowly punctate medially, scutellate laterally; laterally more or less parallel-sided until rounded post-medially and then narrowed to rounded apices. Ventral surface striolate with sparse short setae.

Female

Size: 7.9 x 3.3 mm (4).

Colour: Head purple apically, green basally. Antennomeres: 1 purple; 2-11 black. Pronotum dull green. Scutellum black. Elytra black medially, purple-red laterally. Ventral sterna purple with green reflections; abdomen green except for S7 purple. Legs purple.

Shape and sculpture: as in male.

Distribution

WA: Lake Grace, Balladonia. SA: no locality data available. One specimen collected on *Grevillea*.

Remarks

The colour combination of this species is similar to that found in *S. cinctus*. Their distinguishing features are discussed earlier.

Etymology

This species is named for its shape *crassus* L., broad.

Stanwatkinsius demarzi sp. nov.

(FIG. 2m)

Holotype: ♂, Woodridge, W.A., intercept trap, 9.xi.1997, H. Demarz, SAMA I 21493.

Allotype: ♀, Woodridge, W.A., intercept trap, 10.xi.1998, H. Demarz, SAMA I 21494.

Paratypes: WA: ♂, ♀, Woodridge, 20.x.96. H. Demarz, SAMA; ♂, ♀, 4.xi.96, Woodridge, intercept trap, H. Demarz, SAMA; ♂, 7.xi.96, Woodridge, intercept trap, H. Demarz, SAMA; ♂, 10.xi.96, Woodridge, intercept trap, H. Demarz, SAMA; 2 ♂♂, Woodridge, intercept trap, 1/18.xi.1997, H. Demarz, SAMA; 2 ♂♂, Woodridge, intercept trap, H. Demarz, 30.x.1998 SAMA; ♂, Woodridge, intercept trap, 18.xi.1998, H. Demarz, CLBC & SAMA; ♂, Woodridge, intercept trap, 3.xii.1998, H. Demarz, HDWA.

Male

Size: 5.5 x 2.2 mm (11).

Colour: Head green with yellow reflections apically, blue-green basally. Antennomeres: 1 blue-green; 2-11 black. Pronotum and scutellum blue-green. Elytra dark brown medially with red margin encroaching over humeral callus to basal margin. Ventral surface and legs blue-green.

Shape and sculpture: Head finely punctured, small median apical sulcus. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate; apical margin projecting medially, basal margin sinuate; dorsal carina diverging from ventral carina basally then parallel to it, not reaching margin. Scutellum scutiform, flat, wrinkled. Elytra scutellate; laterally more or less straight-sided from base, sides gradually converging, rounded post-medially and narrowed to rounded apices. Ventral surface scutellate with sparse very short setae pointing posteriorly.

Female

Size: 5.4 x 2.3 mm (3).

Colour: Head, pronotum and scutellum coppery. Elytra as in male. Ventral surface and legs coppery.

Shape and sculpture: as in male.

Distribution

Banksia menziesii R. Br. woodland on WA coastal plain.

Remarks

This species is closest to *S. constrictus*. Their distinguishing features have been discussed previously.

Etymology

Named after the collector H. Demarz, Woodridge, WA.

Stanwatkinsius grevilleae sp. nov.

(FIG. 2k)

Holotype. ♂, 13 km N Galena, WA, 11.ix.1998, T. M. S. Hanlon, SAMA I 21495.

Allotype. ♀, same data as holotype, SAMA I 21503.

Paratypes. WA: 3 ♀♀, Gammin, 28.ix.1936, on *Hakea*, H. W. Brown, MHSA; ♀, Burracoppin, 8.x.1938, on *Hakea*, H. W. Brown, MHSA; 6 ♂♂, 7 ♀♀, Curtin, 16/17.x.1938, on *Hakea*, H. W. Brown, MHSA; ♂, Spencer's Brook, 16.x.45, R. P. McMillan, SAMA; 2 ♂♂, Yellowdine, 11.x.53, F. H. Uther Baker, WAMA; ♀, Lake Varley, 21.ix.54, F. H. Uther Baker, WAMA; ♂, 34 km E Yellowdine, 16.x.77, M. Peterson, MPWA; ♂, no 7 link, x.1977,

M. Powell, MPWA; ♀, N7T Radio, 12.x.77, M. Powell, MPWA; 3 ♂♂, N7T Radio, 13.x.77, M. Powell; 2 ♀♀, 34 km E Yellowdine, 13.x.77, S. Wilson, MPWA; ♀, Carrabin, 13.x.1980, on *Melaleuca*, T. M. S. Hanlon, MHSA; 2 ♂♂, 9 km NNE Zanthus, on *Grevillea* leaves, 21.x.86, M. Powell, MPWA; ♀, 10 km E Norseman, 24.x.86, on *Casuarina*, M. Powell, MPWA; ♂, 10 km SW Moir Rock, 18.xi.88, on *Grevillea* leaves, M. Powell, MPWA; 3 ♂♂, ♀, 34 km E Yellowdine, 28.x.89, on *Grevillea* leaves, Golding/Powell, MPWA; ♂, 19 km N Galena, 22.ix.90, on *Casuarina*, Golding/Powell, MPWA; ♀, N7T, 32 km E Yellowdine, 21.x.1991, on *Casuarina*, T. M. S. Hanlon, MHSA; ♀, 60 km N Galena Bridge, 28.ix.92, on *Grevillea* fol., Golding/Powell, MPWA; ♂, 12 km N Galena Bridge, 30.ix.92, on *A. campestris*, Golding/Powell, MPWA; 3 ♂♂, 3 ♀♀, 49 km N Galena Bridge, 10.x.92, Golding/Powell, MPWA; ♀, 53 km E Yellowdine, 23.x.93, *Casuarina*, M. G.M. P., MPWA; ♂, 2 ♀♀, 15 km S Billabong, 20.x.1996, Kershaw/Golding, MGWA; ♂, 48 km N Galena Bridge, 7.ix.1996, on *Grevillea*, Golding/Powell, MPWA; 2 ♂♂, 5 ♀♀, 80 km N Moora, 20.x.1996, *Allo. campestris*, D. Knowles, MPWA; 4 ♂♂, 4 ♀♀, 73 km ENE Kumarina, 27.viii.1997, on *Grevillea* leaves, D. Knowles, MPWA; ♂, 5 ♀♀, same data as holotype, MHSA; 2 ♂♂, 2 ♀♀, 40 km N Koolyanobbing, 9.x.98, on *Grevillea*, M. Powell, MPWA; ♂, 3 ♀♀, 40 km N Koolyanobbing, 9.x.1998, *Grevillea* leaves, T. M. S. Hanlon, MHSA; 3 ♂♂, 4 ♀♀, 92 km W Useless Loop, 15.x.1999, on *Grevillea* leaves, S. Barker, SAMA;

Male

Size: 6.2 x 2.4 mm (41).

Colour: Head blue-green, coppery on the apical margin between the antennal foveae. Pronotum blue-green sometimes with medial yellow reflections. Scutellum blue-green with variable yellow reflections. Elytra dark brown with red lateral margins continuous for short distance along basal margin. Ventral surface and legs blue-green.

Shape and sculpture: Head coarsely punctured, median apical fovea. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate, apical margin straight, basal margin sinuate, dorsal carina diverging from ventral carina at base then more or less parallel-sided until terminating before reaching the anterior margin. Scutellum flat, without punctures. Elytra scutellate, laterally parallel-sided from base, rounded post-medially and narrowed to rounded apices. Ventral surface scutellate with short setae.

Female

Size: 6.5 x 2.5 mm (49).

Colour: Head, pronotum, scutellum, ventral surface and legs rose-red. Elytra dark brown with rose-red lateral margin extending for short distance along basal margin. Shape and sculpture: as in male.

Distribution

SE and SW WA, associated with *Grevillea* spp.

Remarks

This species is closest to *S. demarzi* sp. nov. They can be separated on the following: *S. grevilleae* is larger, 6.2 mm against 5.5 mm, and does not occur on the coastal plain; in males, the margin dorsad to the antennal fovea is cupreous, but is not in *S. demarzi*; the head punctation is noticeably coarser in *S. grevilleae* than in *S. demarzi*.

Etymology

The species is named for its association with *Grevillea* spp.

Stanwatkinsius kermeti sp. nov.
(FIG. 2g)

Holotype: ♂, Boyne R., 120 km S Rockhampton, Qld, 4.xi.1975, on *Casuarina cunninghamiana*, S. Barker, SAMA 121496.

Paratypes: Qld: 2 ♂♂, Gladstone, 20.xii.45, S. Brock, ANIC. NSW: ♂, Charity ck, Bridge, Manning R. via Kimbricki, 10.xii.91, S. Watkins, SAMA.

Male

Size: 6.9 × 2.4 mm (4).

Colour: Head, antennae, pronotum, scutellum green with yellow reflections. Ventral surface green. Legs green with yellow reflections.

Shape and sculpture: Head punctured, flat, with thin glabrous median line from apex to middle, continuing to base as impressed line, with a round glabrous patch on each side closer to apex than base. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate; anterior margin projecting medially, basal margin bisinuate; lateral carina diverging from lateral margin basally, then more or less parallel to it until after middle where it terminates. Scutellum flat, without punctures; anterior margin convex. Elytra with shallow punctures medially, striolate laterally; margin parallel sided from base until post-medial, tapered to rounded apices. Ventral surface faintly scutellate, with sparse short setae.

Female

Unknown.

Distribution

Qld: Gladstone, on *Casuarina cunninghamiana* Miq. NSW: Northern coastal, on *Casuarina cunninghamiana*.

Remarks

This is an elongate species. It differs from all but *S. powelli* sp. nov. in the position of the dorsal carina on the pronotum. Viewed from above, the sides of the pronotum diverge from the base; they converge to the apical margin at the point where the dorsal carina converges on the ventral carina, forming a slight protuberance on each side. Male genitalia are a different shape from males of *S. uniformis* the only other all green, but smaller species.

Etymology

The species is named after Kermi the green frog from the Muppets.

Stanwatkinsius lindi (Blackburn, 1897), comb. nov.
(FIG. 2i)

Cisseis lindi Blackburn 1887:254; 1891:300. Kerremans 1892:225; 1903:229. Carter 1923:167; 1929:278. Obenberger 1934:844.

Holotype: ♂, *Cisseis lindi* Blackburn, S.A., (T 319) BMNH, examined.

Other specimens examined: SA: 4 ♂♂, 2 ♀♀ Tanunda, 1.xi.1887, Tepper, SAMA; ♀, Williamstown, 22.x.1888, Tepper, SAMA; 2 ♂♂, 2 ♀♀, Lucindale, Feuerherdt, SAMA; 2 ♂♂, Warunda, Eyre Peninsula, x.1909, S.A. White, SAMA; ♀, ii.13, NMVA; ♂, ♀, no data, QMBA; ♂, no data, SAMA; ♂, 18km W Vivonne Bay, Kangaroo Island, 12.x.1966, N. McFarland, M. Pate, SAMA; 2 ♂♂, Verran Hill, Hineks N.P., Eyre Peninsula, 7.x.1979, D. Lucis, SAMA, Vic.: ♀, Little Desert, 11 km S Kiata, 9.xi.1978, S. Barker, SAMA; ♀, Big Desert, 12 km N Broken Bucket well, 16.xi.1981, S. Barker, SAMA.

Male

Size: 5.9 × 2.4 mm (11).

Colour: Head coppery. Antennomeres: 1 coppery; 2-11 black. Pronotum and scutellum coppery or coppery bronze. Elytra dark blue medially, red laterally. Ventral surface and legs coppery.

Shape and sculpture: Head with close, shallow punctures, shallow median sulcus at apex soon projecting into an impressed line reaching base. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate, apical margin projecting medially over half its length, basal margin

bisinate, dorsal carina convex, widely separated from ventral carina except at base, not reaching apical margin, interval between wrinkled. Scutellum flat, glabrous, basal margin slightly concave. Elytra punctured medially, scutellate laterally, margin parallel-sided from base, rounded post-medially and narrowed to rounded apex. Ventral surface scutellate, with moderately long setae.

Female

Size: 6.0 x 2.5 mm (10).

Colour: as in male

Shape and sculpture: as in male.

Distribution

SA, Barossa Valley, SE, Kangaroo I. Vic.; Big and Little Deserts.

Remarks

The only species known to overlap the distribution of *S. lindi* is *S. uniformis*, a small all green species. Differences between *S. lindi* and *S. constrictus* are discussed earlier.

Stanwatkinsius macmillani sp. nov.

(FIG. 21)

Holotype: ♂, Watning, W.A., 19.xi.1950, R. P. McMillan, SAMA I 21497.

Paratypes: 4 ♂♂, same data as holotype, SAMA; 3 ♂♂, Bejoording, W.A., 19.xi.1950, R. P. McMillan, WAMA

Male

Size: 6.0 x 2.2 mm (8).

Colour: Head green apically with yellow reflections, blue-green basally. Antennomeres: 1-2 green; 3-11 black. Pronotum and scutellum blue-green. Elytra brown medially green laterally. Ventral surface and legs blue-green.

Shape and sculpture: Head punctured, very small sulcus at apex projecting post-medially as impressed line. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate; apical margin more or less straight, basal margin bisinuate; dorsal carina diverging from ventral carina at basal margin then more or less parallel-sided, convex post-medially but not reaching apical margin or ventral carina. Scutellum flat, without punctures. Elytra scutellate; laterally more or less parallel-sided from base, rounded post-medially and narrowed to rounded apices. Ventral surface scutellate with short setae.

Female

Unknown.

Distribution

Known only from two localities in WA, both devastated by land clearance for agriculture.

Remarks

This species is closest to *S. demarzi* sp. nov. They can be separated on the following: the male genitalia are a different structure; their colour patterns are different.

Etymology

Named after the collector, R. P. McMillan, Kallaroo.

Stanwatkinsius powelli sp. nov.

(FIG. 2c)

Holotype: ♂, 74 km SE Yalgoo, W.A., 19.9.91, on *Grevillea* leaves, M. Powell, SAMA I 21498.

Allotype: ♀, same data as holotype, SAMA I 21499.

Paratypes: WA: ♂ same data as holotype, MPWA; ♂, ♀, Cue, H. W. Brown, MHSA.

Male

Size: 6.2 x 2.2 mm (3).

Colour: Head green or purple with cupreous reflections. Antennae bronze. Pronotum green or purple medially, cupreous laterally. Scutellum cupreous. Elytra purple medially, merging into a very narrow violet band which abuts lateral bronze mark anteriorly and lateral blue mark apically. Ventral surface and legs purple with cupreous reflections.

Shape and sculpture: Head shallowly punctured, with medial carina at apex projecting to base as impressed line, with a protuberance on each side closer to base than apex. Antennomeres: 1-4 obconic; 5-11 triangular. Pronotum striolate; apical margin projecting medially, basal margin sinuate; dorsal carina diverging from ventral carina at base, convex reaching ventral carina post-medially. Scutellum flat, without punctures. Elytra scutellate, laterally more or less parallel-sided, round post-medially and narrowed to rounded apices. Ventral surface scutellate, with short setae.

Female

Size: 6.7 x 2.4 mm (2).

Colour: as in male.

Shape and sculpture: as in male.

Distribution

The specimens were collected from two localities in WA. Those from Cue had green heads, those from near Yalgoo had purple heads.

Remarks

The dorsal carina on the pronotum is positioned in the same way as in *S. kermeri* sp. nov. as previously discussed. That feature and the colour pattern distinguishes the species from all others.

Etymology

Named after M. Powell, Melville.

Stanwatkinsius rhodopus sp. nov.

(FIG. 2d)

Holotype: ♀, Marsupial Ck E Croydon, NQld, 26.iv.1996, J. & P. Hasenpusch, SAMA 1 21492.

Male

Unknown.

Female

Size: 8 x 3 mm (1).

Colour: Head roseate. Antennomeres: 1-2 cupreous; 3-11 black. Pronotum black medial band, roseate laterally. Scutellum mainly black, cupreous at ends of lateral extensions. Elytra dark blue along suture and at apex, green-blue laterally. Ventral surface and legs cupreous purple.

Shape and sculpture: Head punctured, small median carina at apex located in a depression with a glabrous unpunctured area on each side, continuing to base as impressed line. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum punctured medially, striolate laterally; anterior margin projecting medially, basal margin bisinuate; dorsal carina diverging sinuously from lateral margin basally approaching lateral margin post-medially but not reaching it. Scutellum flat, without punctures, basal margin straight. Elytra punctured medially, scutellate laterally; margin parallel-sided from base rounded post-medially and narrowed to rounded apices. Ventral surface shallowly punctured medially, scutellate laterally with very short setae.

Distribution

This species is known from a single locality in NQld

Remarks

This species occurs further north than any other known species.

Because of its unique colouration it cannot be confused with any other species.

Etymology

The species is named for its rose coloured head and pronotum from *rhodopus*, Gk. rosy.

Stanwatkinsius speciosus sp. nov.

(FIG. 2f)

Holotype: ♂, 25 km N Eneabba, W.A., 24/25.x.1984, at night, A. A. Calder, ANIC.

Allotype: ♀, same data as holotype, ANIC.

Paratypes: WA: ♀, no data, Blackburn, SAMA: ♀, 17 km S Northampton, 1.x.1981, L. D. Naumann, J. C. Cardale, ANIC.

Male

Size: Male, 6.6 x 2.7 mm (1).

Colour: Head green apically, violet basally. Antennomeres: 1-2 green; 3-11 bronze. Pronotum violet laterally brassy-bronze medially. Scutellum violet. Elytra brassy bronze laterally, bronze medially. Ventral surface and legs violet.

Shape and sculpture: Head punctured, shallow median sulcus apically, merging into impressed line reaching base. Antennomeres: 1-3 obconic; 4-11 triangular. Pronotum striolate, apical margin broadly projecting medially, basal margin bisinuate; dorsal carina diverging from lateral margin basally then more or less parallel-sided until post-medial, not reaching apical margin. Scutellum flat, without punctures, basal margin concave. Elytra punctured medially, scutellate laterally; lateral margins more or less parallel-sided from base until rounded post-medially then narrowed to rounded apices. Ventral surface scutellate, with short setae.

Female

Size: 6.7 x 2.6 mm (3).

Colour: entirely coppery-red.

Shape and sculpture: as in male.

Distribution

WA: Coastal plain between Eneabba and Northampton associated with *Hakea* spp.

Remarks

This species is closest to *S. constrictus*. It can be distinguished by: being larger species than *S. constrictus*; male genitalia are broader than in *S. constrictus*; the colour pattern of males and females of both species is different.

Etymology

This species is named for its colour *speciosus* L., beauty.

Stanwatkinsius subcarinifrons (Thomson, 1879),
comb. nov.
(FIG. 2p)

Cissey *subcarinifrons* Thomson 1879:53. Kerremans 1892:227 (*subcarenifrons*); 1903:230 (*subcarenifrons*); Carter 1923:167 (*subcarenifrons*); 1929:279 (*subcarenifrons*); Obenberger 1934:855 (*subcarenifrons*).

Cissey *occidentalis* Blackburn 1887: 255. Kerremans 1892:226; 1903:230. Carter 1923:167 (? var. *subcarenifrons*); 1929:279. Obenberger 1934:851. syn. nov.

Holotype: ♀, *C. subcarinifrons* Thomson, King George's Sound, MNHN, examined. Holotype ♂, *C. occidentalis* Blackburn, Western Australia, BMNH examined.

Other specimens examined: WA: 11 ♂♂, 3 ♀♀, 9.6 km W Goomalling, 2.xii.56, S. Barker, SAMA; 2 ♂♂, ♀, 6.4 km E Bejoording, 2.xii.56, S. Barker, SAMA; 4 ♂♂, 109 km N Geraldton Hwy, 1.xii.1956, S. Barker, SAMA; ♂, ♀, 3 km NE Gosnells, 1.xii.1957, S. Barker, SAMA; ♀, 13 km E North Bannister, 19.xi.1970, S. Barker, SAMA; ♀, 58 km W Tammin, Goldfields Rd., 23.xii.1972, S. Barker, SAMA; ♂, ♀, Woodridge, intercept trap, 7.xi.1997, H. Demarz, CLBC; ♀, Woodridge, 8.xii.1997, H. Demarz, SAMA; ♀, Woodridge, 18.xi.1998, H. Demarz, SAMA; 3 ♀♀, Woodridge, 3.xii.1998, H. Demarz, HDWA; ♂, Swan R., Lea, SAMA.

Male

Size: 5.9 x 2.3 mm (19).

Colour: Head brown or green. Pronotum brown medially, green laterally. Scutellum brown. Elytra usually brown, some specimens green laterally. Ventral surface and legs green.

Shape and sculpture: Head punctured, with short median carina from apex continuing to base as impressed line. Antennomeres: 1-4 obconic; 5-11 triangular. Pronotum striolate; anterior margin broadly projecting medially, basal margin bisinuate; dorsal carina diverging from lateral margin basally, curving towards lateral margin post-medially but not reaching it. Scutellum flat, without punctures, anterior margin straight. Elytra scutellate, faintly medially, heavily laterally; laterally parallel-sided until rounded post-medially, then narrowed to rounded apices. Ventral surface scutellate; with short setae.

Female

Size: 6.2 x 2.4 mm (10).

Colour: as in male.

Shape and sculpture: as in male.

Distribution

SW WA, associated with *Allocasuarina* spp.

Remarks

This species is one of the smallest in the genus. Its colour combination is unique and it cannot be confused with any other species.

Stanwatkinsius uniformis (Thomson, 1879),
comb. nov.
(FIG. 2n)

Cissey *uniformis* Thomson 1879:53. Kerremans 1892:227; 1903:230. Carter 1923:167; 1929:279. Obenberger 1934:856.

Cissey *coraeoides* Kerremans 1898:166; 1903:229. Carter 1923:167 (syn. *uniformis*); 1929:279. Obenberger 1934:856.

Holotype: MNHN, not examined. 4 ♂♂ syntypes *Cissey* *coraeoides* Kerremans, BMNH, examined.

Other specimens examined: SA: 2 ♂♂, Nuriootpa, J. G. O. Pepper, SAMA; ♂, ♀, Ardrossan, J. G. O. Pepper, SAMA; ♀, York Peninsula, Jung, SAMA; ♂, Adelaide Hills, *Casuarina stricta*, 29.xi.64, S. Barker, SAMA; 3 ♂♂, 3 ♀♀, Monarto South, 2.xi.1967, S. Barker, SAMA; 4 ♂♂, ♀, Summit Mt Barker, 16.xii.1967, S. Barker, SAMA; 2 ♂♂, 6 ♀♀, Sellicks Scrub, 24.xi.1979, S. Barker, CLBC & SAMA, Vic.: ♀, Monbulk, Jarvis, SAMA.

Male

Size: 5.5 x 2.2 mm (13).

Colour: Most specimens entirely green. A few with bronze pronotum, very few with green head, bronze on the dorsal surface and green-bronze on ventral surface and legs.

Shape and sculpture: Head punctured, flat, thin median glabrous line from apex to premedial continuing to apex as impressed line. Antennomeres: 1-4 obconic; 5-11 triangular. Pronotum striolate; apical margin straight, basal margin bisinuate; dorsal carina diverging from lateral margin at base not continued past middle. Scutellum flat, rough without punctures. Elytra striolate; laterally parallel-sided from base rounded post-medially and tapered to rounded apex. Ventral surface striolate, with short setae.

Female

Size: 6.0 x 2.3 mm (13).

Colour: as in male.

Shape and sculpture: as in male.

Distribution

SA and Vic., associated with *Allocasuarina verticillata* (Lam.).

Remarks

This is one of the smallest species in the genus. The only other all green species is the larger *S. kermeti* sp. nov. They differ in the position of the dorsal carina on the pronotum, visible when viewed from above in *S. kermeti* but not in *S. uniformis*.

Stanwatkinsius viridimarginalis sp. nov.
(FIG. 2j)

Holotype: ♂, 34 km E Yellowdine, W.A., 16.x.1977, M. Peterson, SAMA 121501.

Allotype: ♀, same data as holotype, SAMA 121502.

Paratypes: WA: ♂, Dryandra State Forest c. 27 km NW of Narrogin, 3.x.1982, C. A. Howard & T. F. Houston, WAMA; ♀, Durokoppin Nature Reserve, 25 km N of Kellerberrin, 22-24.xi.1996, T. F. Houston, WAMA; ♂, Swan R., Lea, SAMA.

Male

Size: 6.5 x 2.5 mm (3).

Colour: Head and antennae green. Pronotum dull purple medially, bright green laterally. Scutellum green medially purple laterally. Elytra dark purple medially merging into a narrow coppery band laterally which abuts a bright green lateral margin. Ventral surface and legs green.

Shape and sculpture: head closely punctured without setae. Antennomeres: 1-4 obovate; 5-11 triangular. Pronotum striolate; apical margin projecting medially, basal margin bismuate; dorsal carina diverging from ventral carina at base then more or less parallel to it until postmedial, not reaching apical margin. Scutellum flat, without punctures. Elytra scutellate, laterally parallel-sided from base, rounded post-medially and narrowed to rounded apices. Ventral surface scutellate with sparse short setae in male, dense longer setae in female.

Female

Size: 8.2 x 3.2 mm (2).

Colour: head and antennae dark purple with coppery reflections. Scutellum and elytra as in male. Ventral surface and legs coppery.

Shape and sculpture: as in male except head setose.

Distribution

This species is only known from Yellowdine, Narrogin and Kellerberrin districts, all in WA.

Remarks

This is an elongate species. Its colour combination makes it distinct from all other species.

Etymology

Named for the lateral green stripe around the elytra *viridis* L., green, *marginis* L., furnish with a border.

Discussion

Species of *Stanwatkinsius*, although similar in general appearance to several groups of Australian buprestids, are true coraebines and thus likely to have diverged from the lineage that also gave rise to *Cisseis* and its relatives. The similarity in ovipositor morphology to *Meliboeithon* is likely less diagnostic of common descent than of the fluidity of these organs in response to oviposition requirements from specific plant associations and placement of eggs on the host, e.g. above or below the substrate. From the phylogenetic perspective suggested by Bellamy (1988), and subsequent discussion with colleagues about coraebine evolution, it would seem that the use of ovipositor morphology as an indicator of evolutionary divergence is perhaps not well-founded since in some genera, e.g. *Coraebus* Gory & LaPorte, there is a wide range of ovipositor morphology, both in the so-called general buprestid form and in the 'coraebine' ovipositor which possess ventral brushes. However, in the Australian coraebine genera studied by the authors, either one type or the other is present. Since *Stanwatkinsius* is obviously related to but divergent from the *Cisseis* lineage, the different ovipositor would split the former genus to the opposite side of the suggested phylogeny (Bellamy 1988) from *Cisseis* and its relatives such as *Neospadea* Blackburn, *Alvimous* Kerrenians and *Pachycisseis* Théry. Pending the completion of a revision of *Cisseis*, there is no reason to venture into further phylogenetic speculation at this time.

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References

- BELLAMY, C. L. (1988) The classification and phylogeny of the Australian Corochini Bedal, with a revision of the Genera *Paracephala*, *Meliboeithon* and *Dinocephalia* (Coleoptera: Buprestidae: Agrilinae). *Invertebr. Taxon.* **2**, 413-453.
- _____ (1990) A revision of the Coroebine genus *Coraebosoma* Obenberger (Coleoptera: Buprestidae: Agrilinae). *Entomologica Scandinavica* **21**, 197-210.
- BLACKBURN, T. (1887) Further notes on Australian Coleoptera with descriptions of new species. *Trans. R. Soc. S. Aust.* **10**, 177-287.
- _____ (1891) Further notes on Australian Coleoptera with descriptions of new Genera and species. *Ibid.* **14**, 292-345.
- CARTER, H. J. (1923) Revision of the Genera *Ethon*, *Cisseis* and their allies (Buprestidae). *Proc. Linn. Soc. NSW* **48**, 159-176.
- _____ (1929) A check list of the Australian Buprestidae. *Aust. Zool.* **5**, 265-303.
- GORY, H & LAPORTE, F. L. (1839) "Histoire naturelle et iconographie des insectes coléoptères, publiée par monographies séparées." Volume **2**, livraisons 25-35 (P. Duménil, Paris).
- KERREMANS, C. (1892) Catalogue synonymique des Buprestides décrits de 1758 à 1890. *Mém. Soc. Ent. Belg.* **1**, 1-304.
- _____ (1898) Buprestides nouveaux de l'Australie et des régions voisines. *Ann. Soc. Ent. Belg.* **92**, 113-182.
- _____ (1903) Coleoptera, Fam. Buprestidae pp. 49-338. In Wytman, P. (Ed.) "Genera Insectorum" Fasc. 12b; 12c; 12d. (Verteneuil & Desmet, Bruxelles).
- OBENBERGER, J. (1934) Buprestidae 4 pp. 782-934. In Junk, W. & Schenkling, S. (Eds) "Coleopterorum Catalogus" Part 143 (W. Junk, 's-Gravenhage).
- THOMSON, J. (1879) "Typi Buprestidarum Musaei Thomsoniani" Appendix 1A (Paris, Émile Deyrolle, rue de la Monnaie, 23).